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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,437	08/08/2003	Yasuhiko Kosugi	405507/0015	3644

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EXAMINER

VO, ANH T N

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/637,437

Applicant(s)

KOSUGI ET AL.

Examiner

Anh T.N. Vo

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 9-13 is/are rejected.
- 7) ☒ Claim(s) 4-8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/23/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

***DETAIL ACTION***

***Specification***

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claims Objection***

Claim 10 is objected to because of the following informalities: "he" on line 4 should be corrected as --the--. Appropriate correction is required.

***CLAIM REJECTIONS***

***Claim Rejections - 35 USC § 112***

Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction or clarification is required.

In claim 1, it is unclear what the "phenomenon" on line 4 and "status" on line 6 are. It is unclear how the "detector module" and "driving circuit" is read on the preferred embodiment. Insofar as understood, no such module and circuit are seen on the drawings. The same is true for claims 11-13.

In claim 4, it is unclear what the "electric power suppliable per unit time" is, how the power can be "suppliable" per unit time since the electric power is a DC voltage.

In claim 5, the recitation "power supplier" is on line 8 is confusing because if this is additional "supplier" or further recitation of the previously claimed "supply unit" on line 2 of claim 4.

In claim 12-13, it is unclear how the recitation “supplies circuit”; “discharge circuit” and “detector module” is read on the preferred embodiment or seen on the drawings.

The remaining claims are dependent from the above claims and therefore also considered indefinite.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

The person shall be entitled to a patent unless-

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 9-13 are rejected under 35 USC 102 (b) as being anticipated by Yauchi et al (US 5500,657).

Note: The method steps are inherently taught in the apparatus device/limitations in the rejections as follow:

Yauchi et al discloses in Figures 1, 4 and 9-10 a circuit for detecting ink comprising:

A container (58) which holds a printing material therein and is mounted on a printing device, said container comprising:

- a detector module (5, 7, Figure 4) that utilizes a phenomenon induced by release of energy in discharge of a detection element (5) to detect a status of the printing material;
- a driving circuit (6) that functions to drive said detector module (5, 7), said driving circuit comprising: a discharge circuit (13, 8) that has a preset impedance and discharges the detection element (5) to release electrical energy accumulated in the detection element (5); and a supply circuit (9, 17, 19) that has a higher impedance than the impedance of said discharge circuit (8,13) and supplies electrical energy to the detection element (5);
- wherein the detection element (5) is a piezoelectric element;

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- wherein discharge of the piezoelectric element (5) subsequent to charge of the piezoelectric element (5) in said driving circuit causes a resonance, and said detector module (7) detects the status of the printing material according to a frequency of the resonance;
- wherein the detected status of the printing material is a remaining quantity of the printing material; and
- wherein the detected status of the printing material is the movement of ink or pressure of the ink.


***Allowable Subject Matter***

Claims 4-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Claims are allowed because the prior art or record fails to suggest “ said container further comprising a power supply unit to drive said detector module, where an electric power suppliable per unit time by said power supply unit is smaller than an electric power dischargeable from the piezoelectric element per unit time by said discharge circuit” in the combination as claimed.

***CONCLUSION***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M.to 7:00 P.M..

The fax number of this Group 2861 is (571) 273-8300.

  
ANH TN VO  
PRIMARY EXAMINER  
September 8, 2006